

Work Order ID 113308

February-12-14 11:05:20 AM

646.9812

113308

Page 1

Item ID: 646.9812

B113308

Accept

N900040100

Setup Start

NS1

Revision ID:

Stop

NS2

Item Name: Lower Cutter Deflector

Start Date: 2/12/14

Start Qty: 4.00

4

Cust Item ID:

Required Date: 2/12/14

Req'd Qty: 4.00

4

Customer:

Reference:

Approvals:

Process Plan: MLS

Date: 14-02-13

Tooling:

Date:

Run Start

NR1

QC:

Date:

SPC (Y/N):

Date:

Stop

NR2

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

Draw Nbr

Revision Nbr

646.9800

A

100

100

BAND SAW

0.00

0.00

Bandsaw

Memo

Cut Blank at 25.150"

Jeaspa Bandsaw

ONE BLANK MAKES TWO PART

14/04/09

4

0

DAS
14
9-89

110

110

HAAS CNC VERTICAL MACHINING #1

0.00

0.00

HAAS 1

Memo

1-Machine per folio FB131

DWG REV: A

FOLIO REV: AA

HAAS CNC vertical machine #1

2- deburr and break all sharp edges

B.A

14/04/10

4

0

DAS
08
9-89

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Suspected Unapproved <input type="checkbox"/>	AGAINST DEPARTMENT/PROCESS <table style="width: 100%;"> <tr> <td>Skid-tube <input type="checkbox"/></td> <td>Crosstube <input type="checkbox"/></td> <td>Water Jet <input type="checkbox"/></td> <td>Engineering <input type="checkbox"/></td> </tr> <tr> <td>Machining <input type="checkbox"/></td> <td>Small Fab <input type="checkbox"/></td> <td>Prod. Eng. Coord. <input type="checkbox"/></td> <td>Quality <input type="checkbox"/></td> </tr> <tr> <td>Thermoforming <input type="checkbox"/></td> <td>Finishing <input type="checkbox"/></td> <td>Rec/Store/Packaging <input type="checkbox"/></td> <td>Other <input type="checkbox"/></td> </tr> <tr> <td>Large Fab <input type="checkbox"/></td> <td>Composite <input type="checkbox"/></td> <td>Supplier <input type="checkbox"/></td> <td></td> </tr> </table>	Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering <input type="checkbox"/>	Machining <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Prod. Eng. Coord. <input type="checkbox"/>	Quality <input type="checkbox"/>	Thermoforming <input type="checkbox"/>	Finishing <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Other <input type="checkbox"/>	Large Fab <input type="checkbox"/>	Composite <input type="checkbox"/>	Supplier <input type="checkbox"/>	
Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering <input type="checkbox"/>															
Machining <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Prod. Eng. Coord. <input type="checkbox"/>	Quality <input type="checkbox"/>															
Thermoforming <input type="checkbox"/>	Finishing <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Other <input type="checkbox"/>															
Large Fab <input type="checkbox"/>	Composite <input type="checkbox"/>	Supplier <input type="checkbox"/>																

Root Cause	Date	Step	Qty	Description of work order update or non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Design									
Doc/Data									
Equip/Tooling									
Handling/Pre									
Material									
Operator									
Offset/Setup									
Process									
Supplier									
Training									
Transport									
Unapproved									

FAULT CATEGORY

Landing Gear <input type="checkbox"/> Bending <input type="checkbox"/> Centre Not Concentric <input type="checkbox"/> Cracks <input type="checkbox"/> Crimp/Kink/Ripple/Wave <input type="checkbox"/> Cuffs <input type="checkbox"/> Crushing <input type="checkbox"/> Heat Treat <input type="checkbox"/> Inspection Strip in Tube <input type="checkbox"/> Marks/Chatter <input type="checkbox"/> Turning Sequence <input type="checkbox"/> Wave/Twist in Tube	General <input type="checkbox"/> Bend <input type="checkbox"/> BOM/Route <input type="checkbox"/> Broken/Damage/Defect <input type="checkbox"/> Burrs <input type="checkbox"/> Contamination <input type="checkbox"/> Countersink <input type="checkbox"/> Cut Too Short <input type="checkbox"/> Drawing <input type="checkbox"/> Drill Holes <input type="checkbox"/> Finish <input type="checkbox"/> Fit/Function	<input type="checkbox"/> Folio/Program <input type="checkbox"/> Grain <input type="checkbox"/> Hardware <input type="checkbox"/> Inspection Incomplete/Unqualified <input type="checkbox"/> Instructions Incomplete/Unclear <input type="checkbox"/> Misaligned/off center <input type="checkbox"/> Mislabeled <input type="checkbox"/> Misread <input type="checkbox"/> Off-set <input type="checkbox"/> Out of Calibration <input type="checkbox"/> Out of Sequence	<input type="checkbox"/> Outside Dimensions <input type="checkbox"/> Over/Under tolerance <input type="checkbox"/> Part Incorrect <input type="checkbox"/> Part Lost/Missing <input type="checkbox"/> Part Moved <input type="checkbox"/> Positioned Wrong <input type="checkbox"/> Power Loss/Surge <input type="checkbox"/> Pressure/Forced Set-up <input type="checkbox"/> Temperature/Cure <input type="checkbox"/> Weld <input type="checkbox"/> Wrong Stock Pulled <input type="checkbox"/> Other
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APICAL
INDUSTRIES, INC.

ENGINEERING CHANGE NOTICE NO. 03828

SHEET 1 OF 8

DWG NO. 646.9800

REV: NC

PREPARED BY: B. PETERS

DATE: 03/19/13

EFFECT ON DWG
☒ INC. ☐ UNINC.

DWG TITLE: DEFLECTOR

APPROVED BY:

ENGR

MFG

QC

EFF:

NEXT ORDER

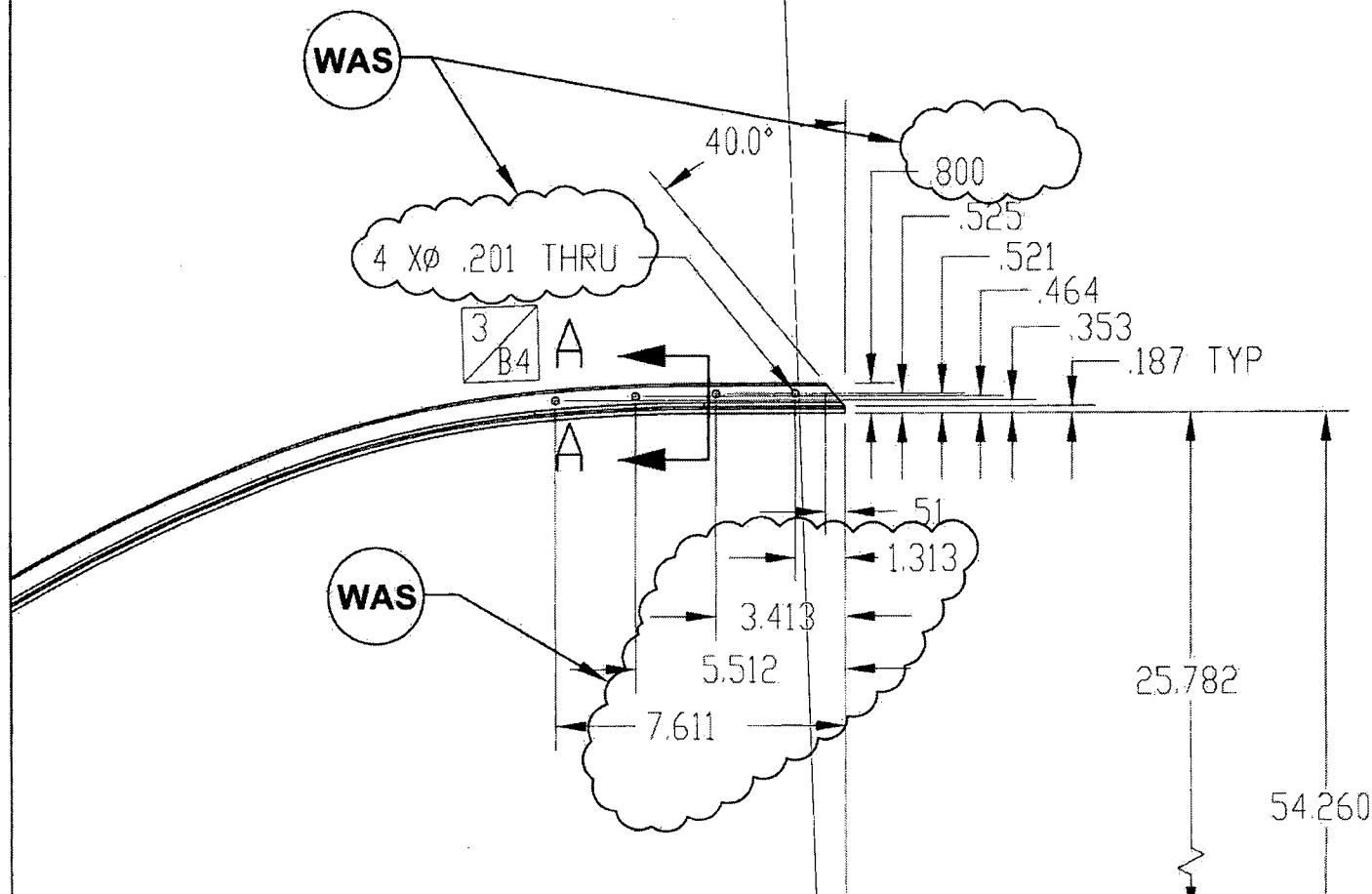
TRANSACTION CODES (TC):
A-ADD C-CREATE
R-REVISE D-DELETE

REASON: REVISED CORNER RADIUS, TOLERANCES, AND ADDED INSPECTION DIMENSIONS.

ECR:

D-13-029

SHEET 1, ZONE A5-A6 & B5-B6 WAS:

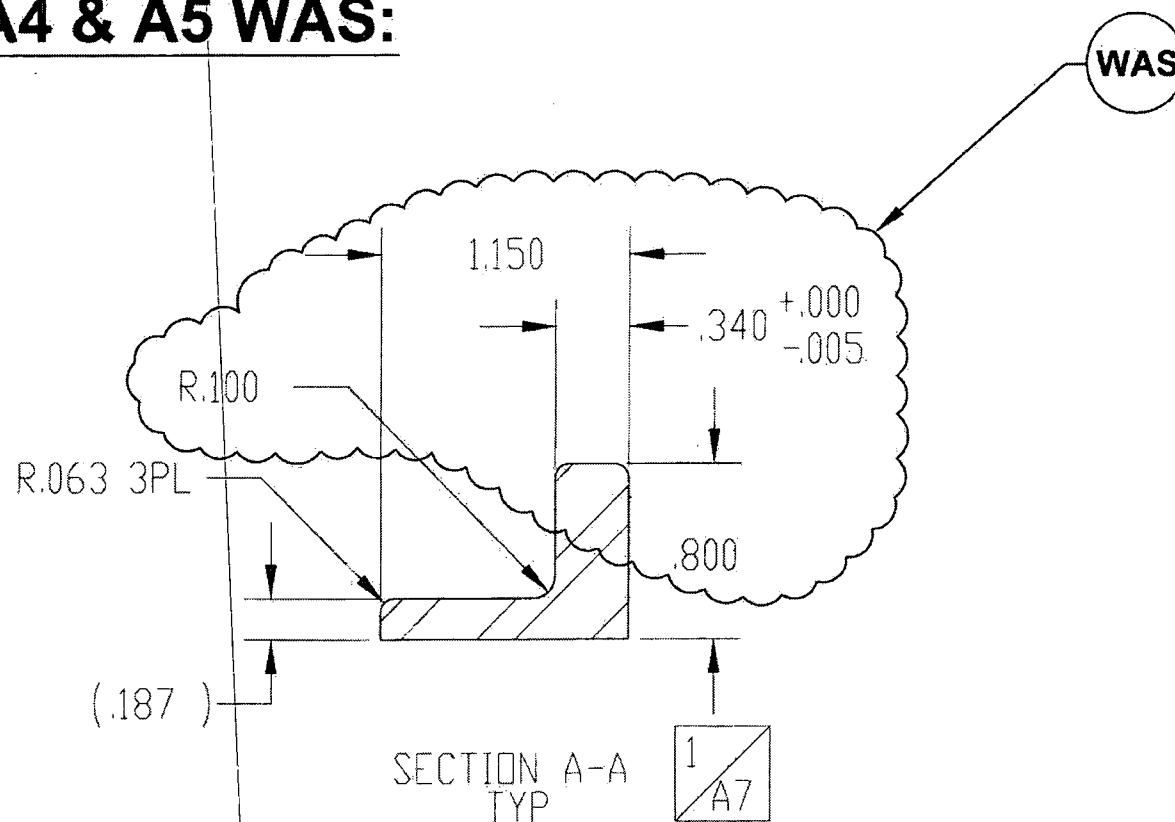


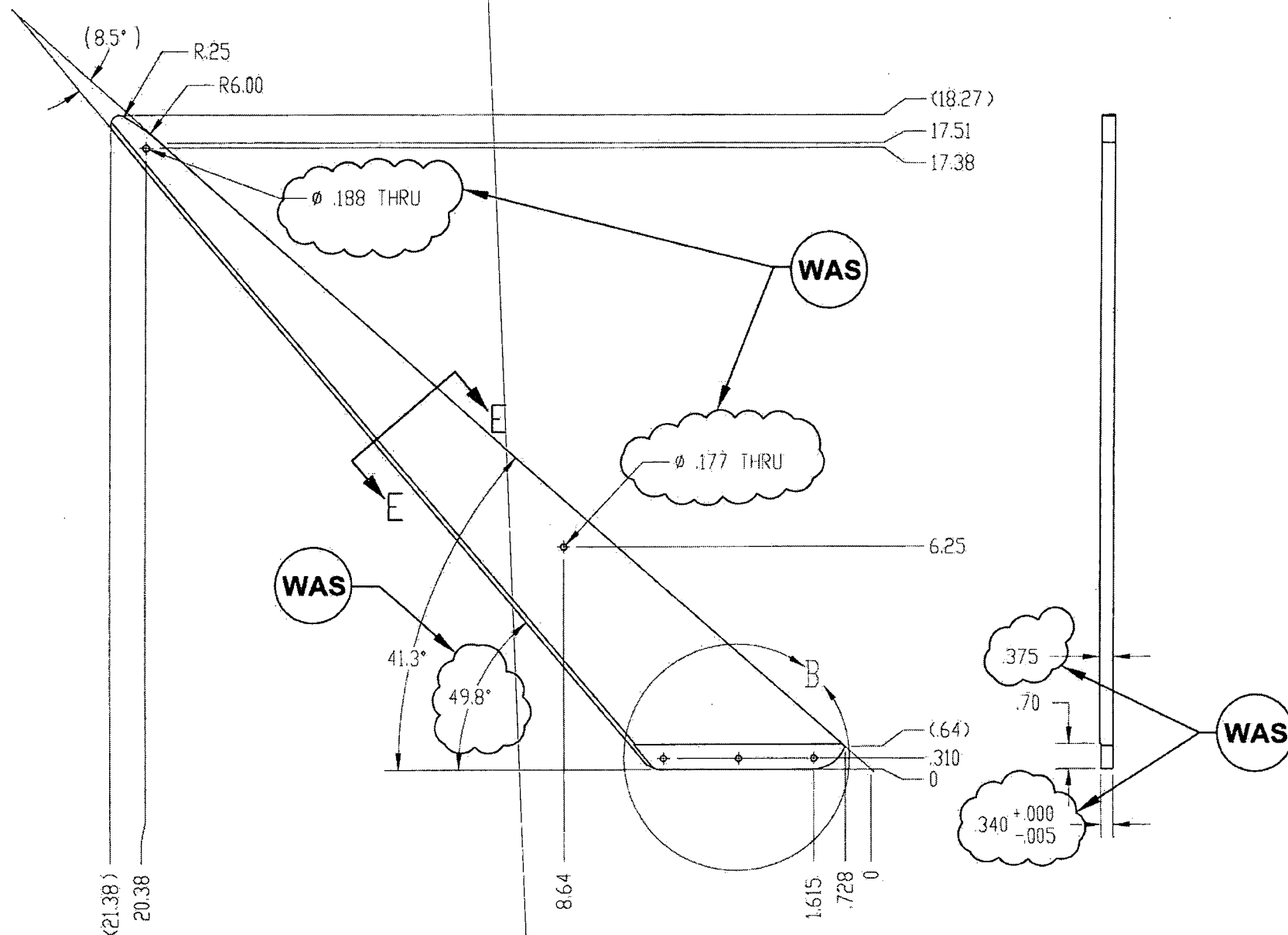
DOCUMENTS EFFECTED:

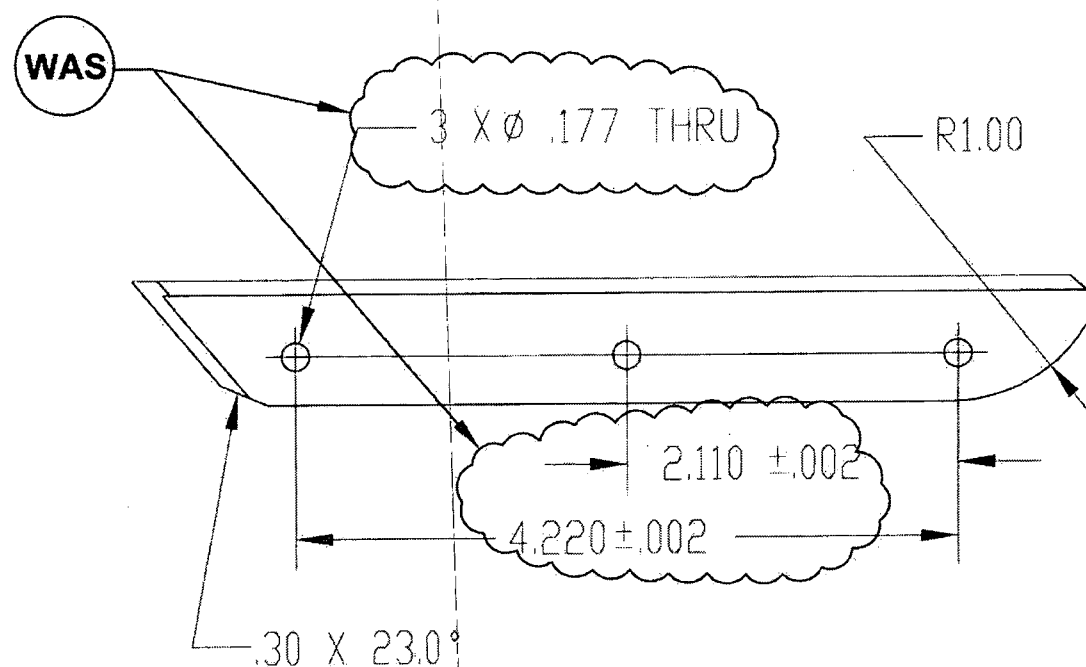
☐ MDL ☐ INSTALL INSTRU ☐ ICA ☐ BOM

CHANGE CATEGORY
☐ MAJOR ☒ MINOR

DER REVIEW REQUIRED
☐ YES ☒ NO

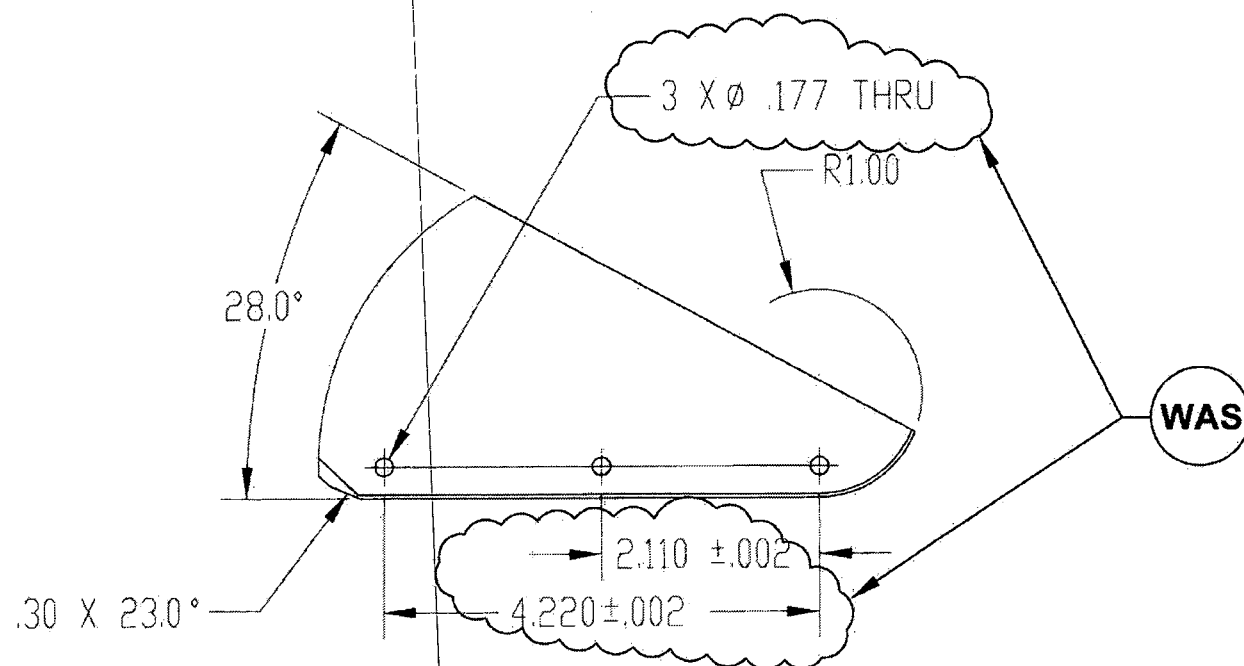
SHEET 3, ZONE A4 & A5 WAS:

SHEET 4, WAS:

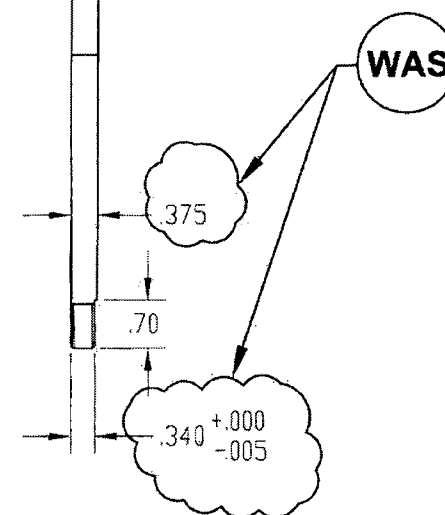
SHEET 4, ZONE C7 & C8 WAS:

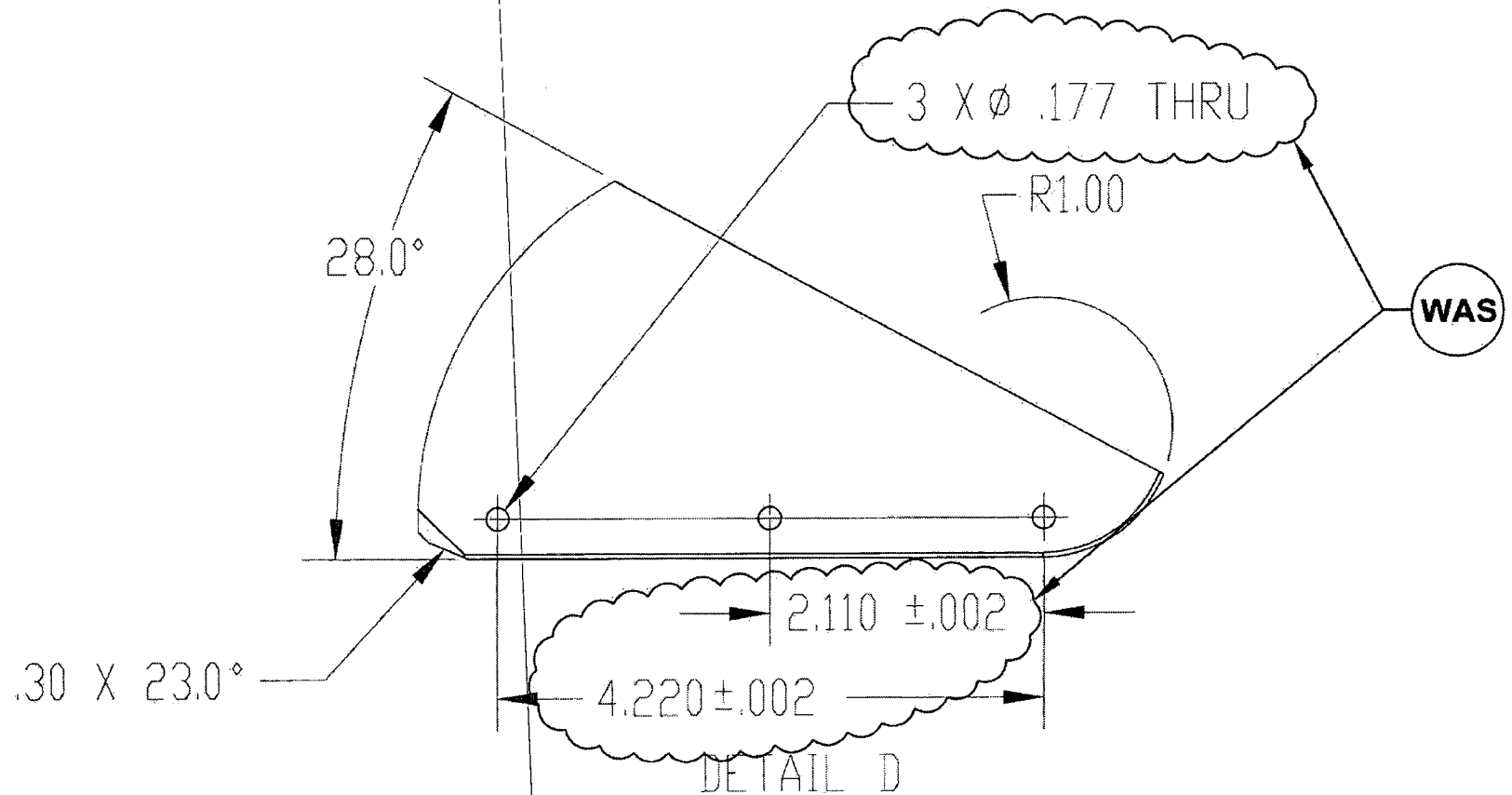
DETAIL B

SHEET 5, ZONE C8, D7, & D8 WAS:



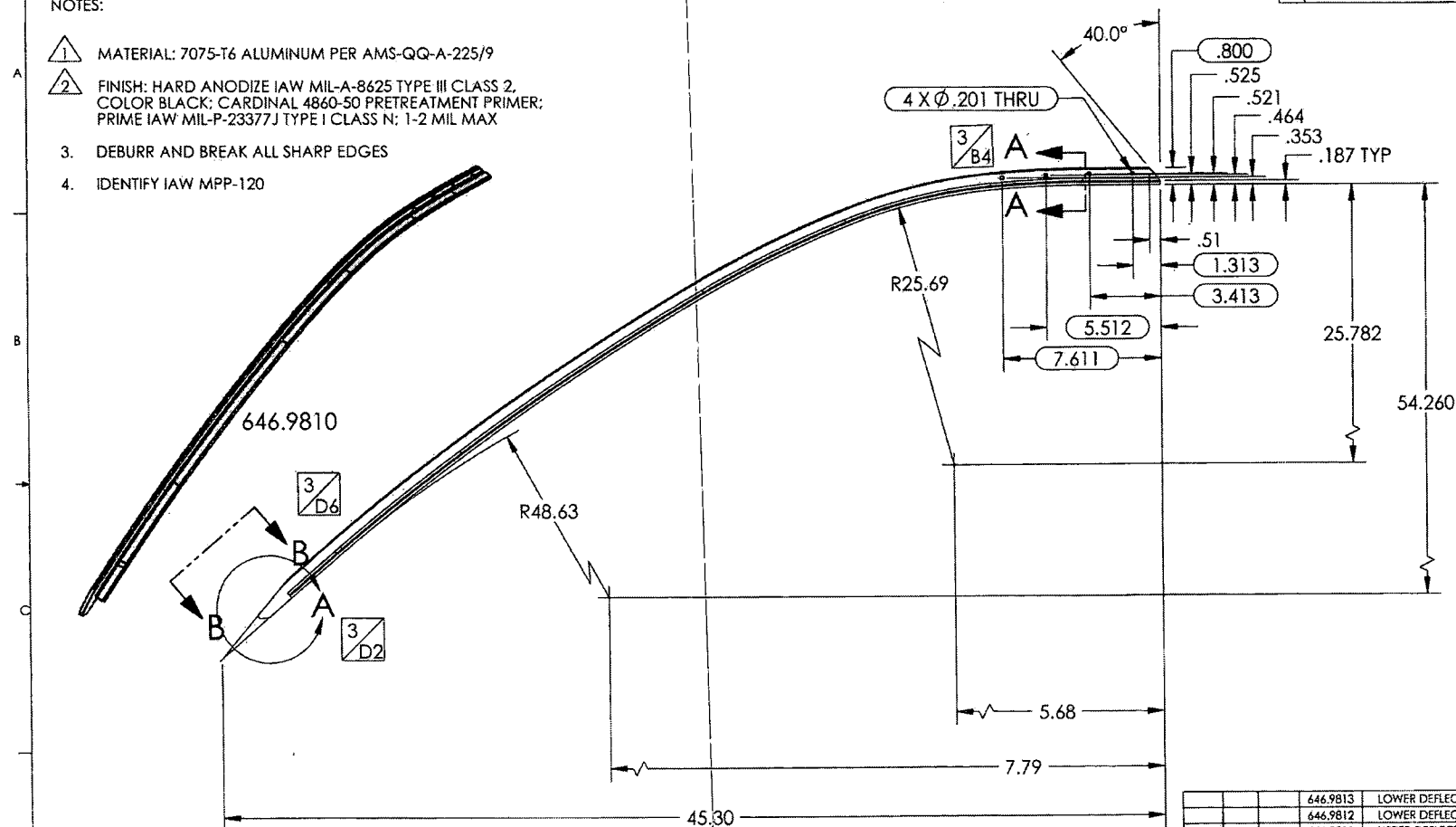
DETAIL C



SHEET 6, ZONE C6 & D6 WAS:

NOTES:

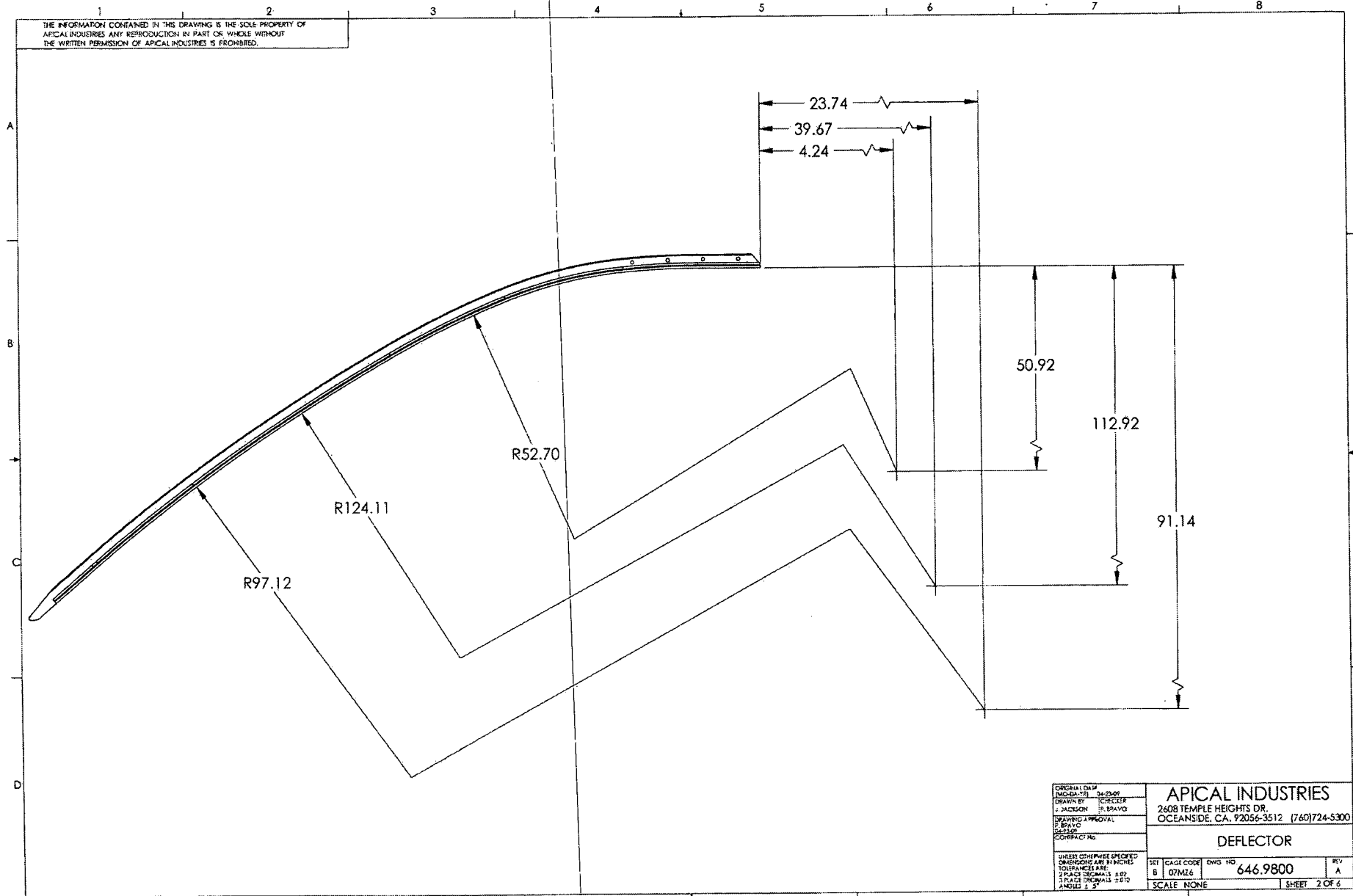
1. MATERIAL: 7075-T6 ALUMINUM PER AMS-QQ-A-225/9
2. FINISH: HARD ANODIZE IAW MIL-A-8625 TYPE III CLASS 2.
COLOR BLACK; CARDINAL 4860-50 PRETREATMENT PRIMER;
PRIME IAW MIL-P-23377J TYPE I CLASS N; 1-2 MIL MAX
3. DEBURR AND BREAK ALL SHARP EDGES
4. IDENTIFY IAW MPP-120



REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
N/C	INITIAL PDLFAM	04/23/09	P. BRAVO
A	INCORPORATED ECH 03028	03/19/13	P. BRAVO

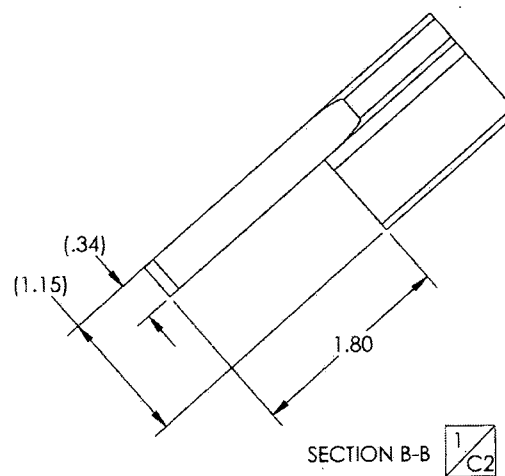
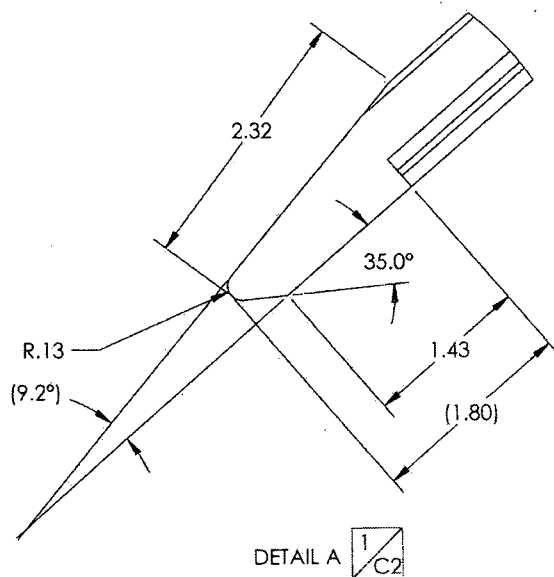
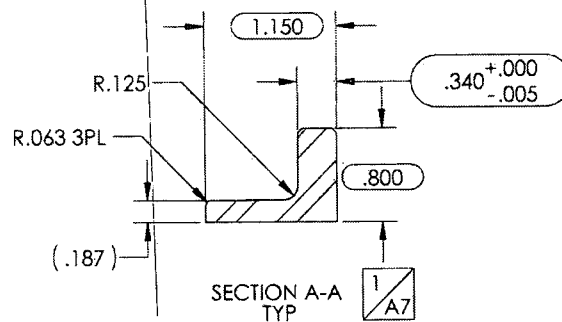
		646.9812	LOWER DEFLECTOR LOW	△	△
		646.9812	LOWER DEFLECTOR HIGH	△	△
		646.9811	UPPER DEFLECTOR	△	△
		646.9810	DEFLECTOR	△	△
	FIND #	PART NO.	DESCRIPTION	MATL	SPEC
QTY			PARTS LIST		
NEXT ASSY (S)			APICAL INDUSTRIES 2608 TEMPLE HEIGHTS DR. OCEANSIDE, CA 92056-3512 (760)724-5300		
646.9500	ORIGINAL DATE MODIFIED 06-23-09 DRAWN BY J. JACKSON CHECKED P. BRAVO DATE OF APPROVAL 7/2/09 SCALE CONTRACT NO.		DEFLECTOR		
(UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: FRACTIONS DECIMALS ±.020 DIMENSIONS ±.015			SIZE B 07M6C	DWG. NO. 646.9800	PIV. A
SCALE			NAME		SHEET 1 OF 6

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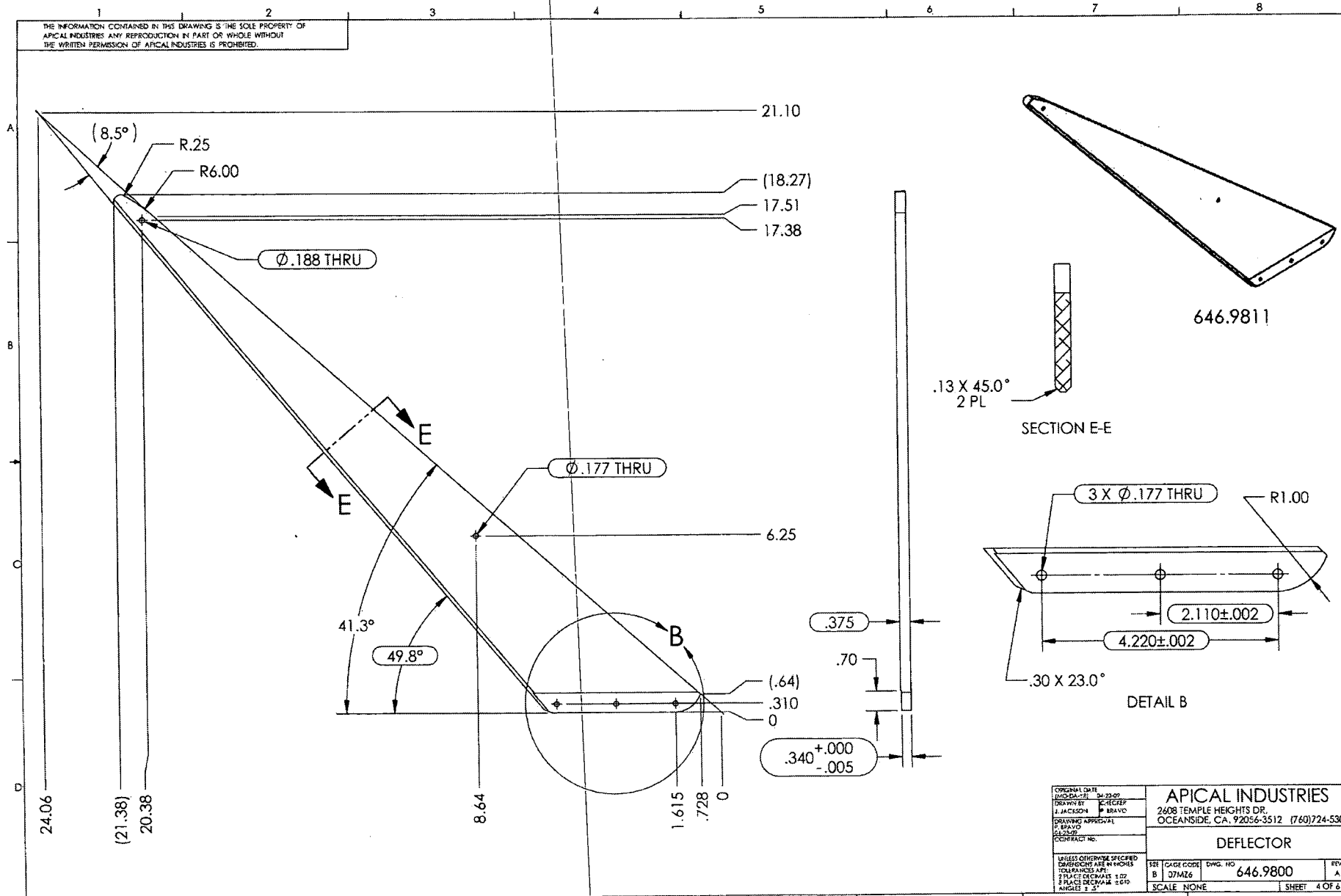
ORIGINAL DATA		APICAL INDUSTRIES	
PROJECT NO.	04-2509	2608 TEMPLE HEIGHTS DR.	
DRAWN BY	J. JACKSON	OCEANSIDE, CA. 92056-3512 (760)724-5300	
CHECKED BY	P. BRAVO	DEFLECTOR	
DRAWING APPROVAL			
DATE			
CONTRACT NO.			
UNLESS OTHERWISE SPECIFIED		SET	REV
DIMENSIONS ARE IN INCHES		B	A
TOLERANCES ARE:		DWG NO.	646.9800
2 PLACE DECIMALS ± 0.01		SCALE	NONE
3 PLACE DECIMALS ± 0.001		SHEET 2 OF 6	
ANGLES ± 5°			

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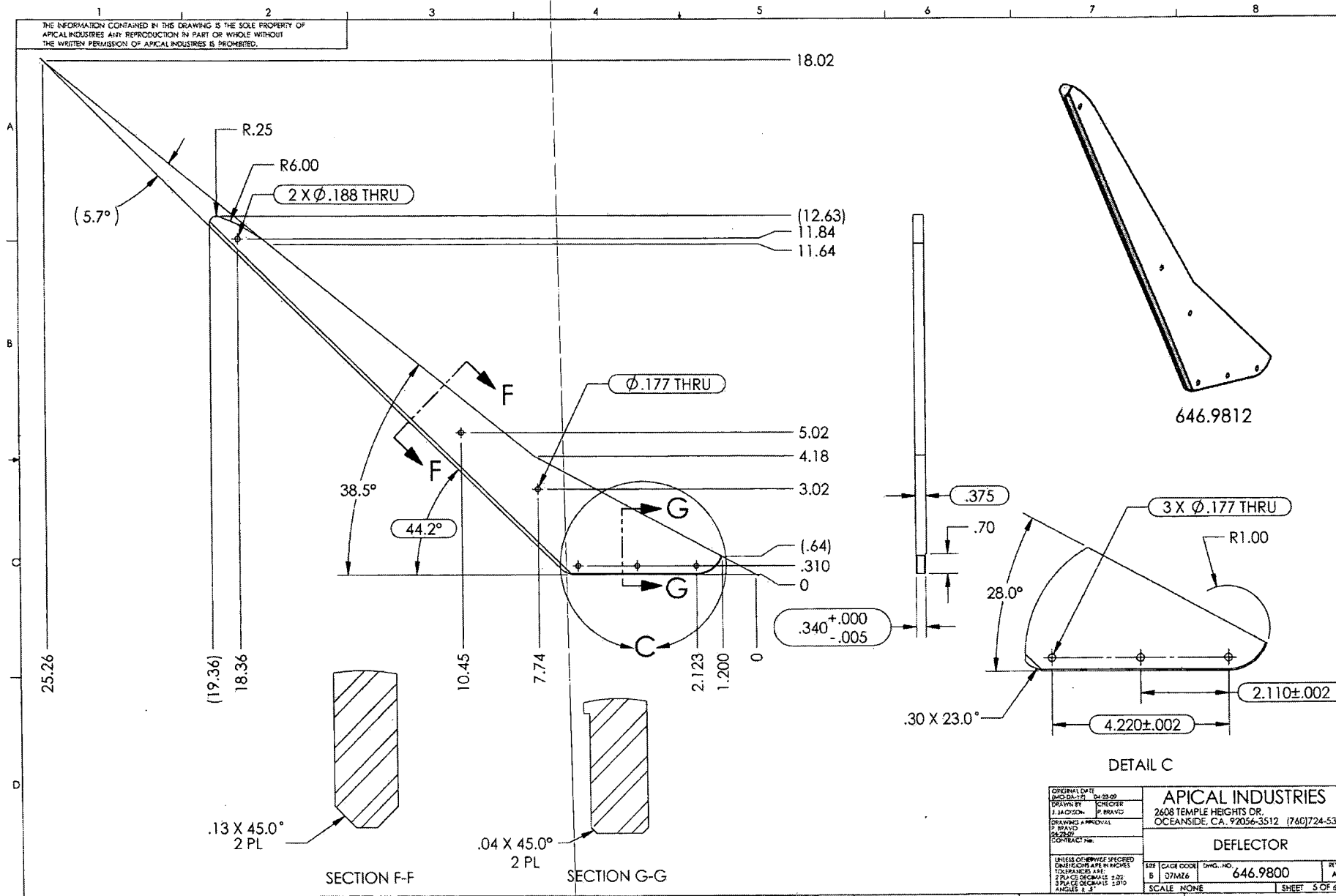
ORIGINAL DATE REV. 01-15 06-23-07		APICAL INDUSTRIES	
DRAWN BY: J. JACKSON		2608 TEMPLE HEIGHTS DR.	
CHECKED BY: P. BRAYO		OCEANSIDE, CA. 92056-3512 (760)724-5300	
DRAWING APPROVAL P. BRAYO		DEFLECTOR	
CONTRACT NO.		SCALE: NONE	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: 2 PLACE DECIMALS ± .01 3 PLACE DECIMALS ± .005 ANGLES ± .5°		REV. A	3 OF 6

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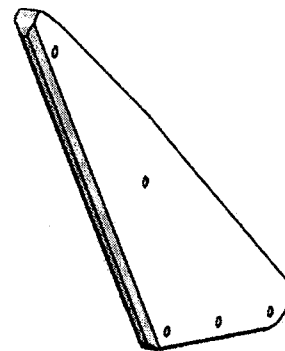
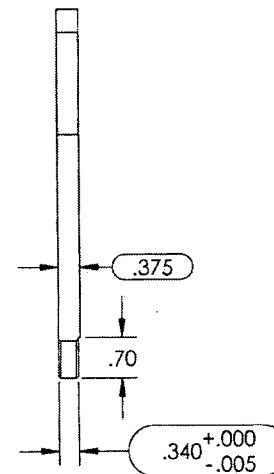
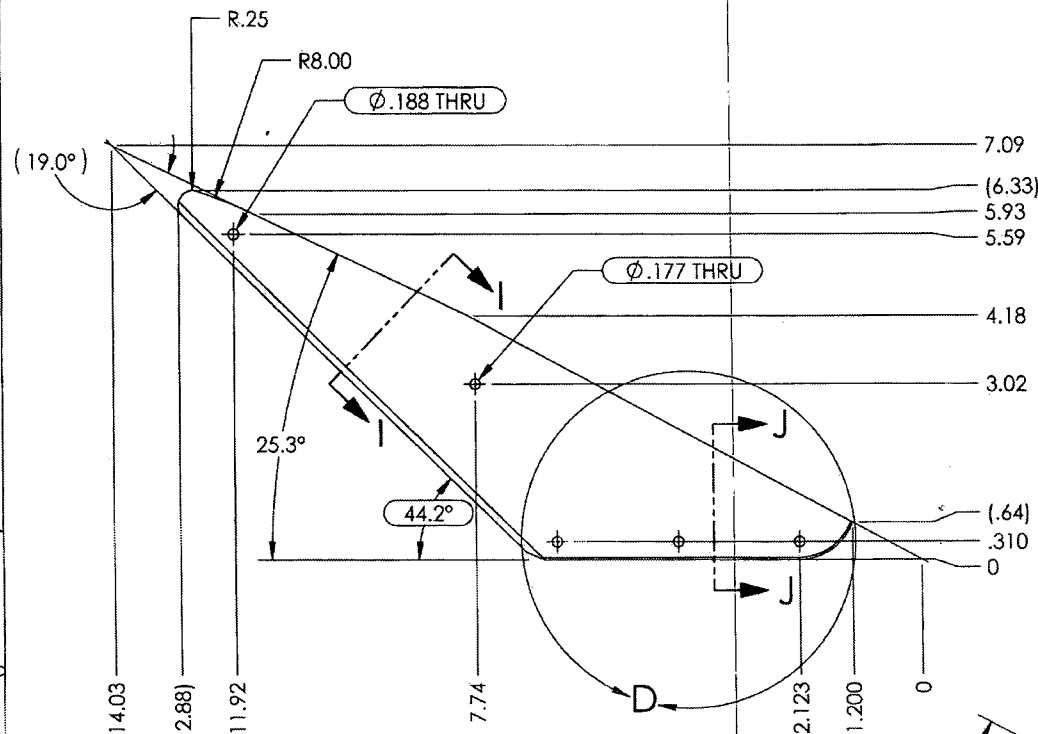
ORIGINAL DATE 10-24-97		APICAL INDUSTRIES	
DRAWN BY J. JACOBSON		2608 TEMPLE HEIGHTS DR. OCEANSIDE, CA. 92056-3512 (760) 724-5300	
DRAWING APPROVAL P. BRAVO		DEFLECTOR	
CONTRACT NO.		646.9800	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: FRACTIONS DECIMALS 1/16 ANGLES ± .5°		SHEET B	REV. A
		DWG. NO. 07M126	
		SCALE NONE	SHEET 4 OF 6

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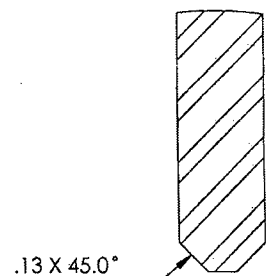


ORIGINAL DATE 04-23-09		APICAL INDUSTRIES	
DRAWN BY J. JACKSON		2608 TEMPLE HEIGHTS DR. OCEANSIDE, CA. 92056-3512 (760)724-5300	
CHECKED BY P. BRAY		DEFLECTOR	
DRAWING APPROVAL P. BRAY		646.9800	
CONTRACT NO.		A	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: 2 PLACE DECIMALS $\pm .02$ 3 PLACE DECIMALS $\pm .010$ ANGLES $\pm .5^\circ$		SHEET 5 OF 6	

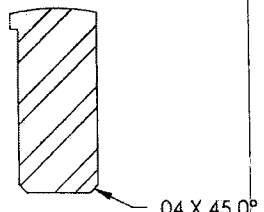
THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF APICAL INDUSTRIES. ANY REPRODUCTION IN PART OR WHOLE WITHOUT THE WRITTEN PERMISSION OF APICAL INDUSTRIES IS PROHIBITED.



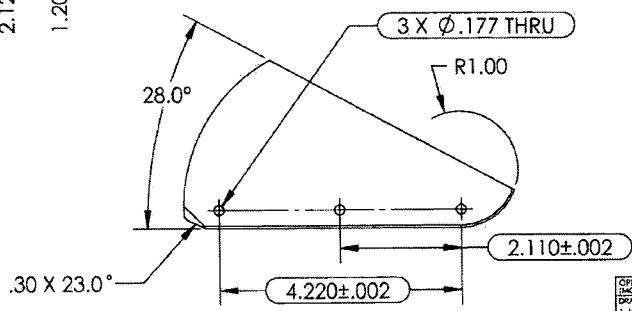
646.9813



SECTION I-I



SECTION J-J



DETAIL D

ORIGINAL DATE INCHES 1/8 5/16 3/8 1/2 5/8 3/4 7/8 1 1 1/4 1 1/2 1 3/4 2 2 1/4 2 1/2 2 3/4 3 3 1/4 3 1/2 3 3/4 4 4 1/4 4 1/2 4 3/4 5 5 1/4 5 1/2 5 3/4 6 6 1/4 6 1/2 6 3/4 7 7 1/4 7 1/2 7 3/4 8 8 1/4 8 1/2 8 3/4 9 9 1/4 9 1/2 9 3/4 10		APICAL INDUSTRIES 2808 TEMPLE HEIGHTS DR. OCEANSIDE, CA. 92056-3512 (760)724-5300	
DRAWN BY J. JACKSON		DEFLECTOR	
CHECKED BY J. BRAVO		646.9800	
APPROVED BY J. BRAVO		A	
CONTRACT NO.		SHEET 6 OF 6	
TOLERANCES UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES FRACTIONS ARE 1/16, 1/8, 3/16, 1/4, 3/8, 1/2, 5/8, 3/4, 7/8, 1, 1 1/4, 1 1/2, 1 3/4, 2, 2 1/4, 2 1/2, 2 3/4, 3, 3 1/4, 3 1/2, 3 3/4, 4, 4 1/4, 4 1/2, 4 3/4, 5, 5 1/4, 5 1/2, 5 3/4, 6, 6 1/4, 6 1/2, 6 3/4, 7, 7 1/4, 7 1/2, 7 3/4, 8, 8 1/4, 8 1/2, 8 3/4, 9, 9 1/4, 9 1/2, 9 3/4, 10		SCALE NONE	



Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
Tel: 613 632 9577
Fax: 613 632 1053

PURCHASE ORDER

Purchase Order ID **PO23813**

Purchase Order Date 4/15/2014

PO Print Date 4/25/2014

Page Number 3 of 6

Order From :

VC-ATG001

A.T.G. INDUSTRIES INC.
731 INDUSTRIELLE ROAD
ROCKLAND, ON K4K 1T2
CANADA

Ship To : DART AEROSPACE LTD

1270 ABERDEEN
HAWKESBURY, ON K6A 1K7
CANADA

Contact Name

Vendor Phone 613-446-4544

Ship To Contact

Ship To Phone

Ship Via: VENDOR'S TRUCK

Ship Acct:

Buyer

Customer POID

Customer Tax # 10127-2607

Terms Net 30

Currency CAD

FOB FCA - (Free Carrier)

Line Total: \$61.00

7	109920	646.9811 UPPER DEFLECTOR	5/7/2014	12.00	\$32.60	✓	\$391.20
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Yes

5/7/2014

FINISH: HARD BLACK ANODIZE AS PER IAW MIL-A-8625 TYPE III, CLASS 2 / PRIME AS PER IAW MIL-P-23377J TYPE 1 CLASS N

Line Total: \$391.20

8	113308	646.9812 LOWER CUTTER DEFLECTOR	5/7/2014	4.00	\$18.15	✓	\$72.60
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Yes

5/7/2014

FINISH: HARD BLACK ANODIZE AS PER IAW MIL-A-8625 TYPE III, CLASS 2 / PRIME AS PER IAW MIL-P-23377J TYPE 1 CLASS N

Line Total: \$72.60

9	112937	646.9812 LOWER CUTTER DEFLECTOR	5/7/2014	2.00	\$18.15	✓	\$36.30
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Yes

5/7/2014

FINISH: HARD BLACK ANODIZE AS PER IAW MIL-A-8625 TYPE III, CLASS 2 / PRIME AS PER IAW MIL-P-23377J TYPE 1 CLASS N

Note:

4/25/2014



A.T.G. Industries Inc.
731, rue Industrielle Rd.
PLATING DEPARTMENT
Rockland, On K4K 1T2
Canada
Ph: (613) 446-4544
Fax: (613) 446-4556

Pack List

Number: 63000

Date: 24-Apr-14

To

DART AEROSPACE LTD
1270 ABERDEEN ST.
HAWKESBURY, ON K6A 1K7
Canada

Ship To

DART AEROSPACE LTD
1270 ABERDEEN ST.
HAWKESBURY, ON K6A 1K7
Canada

Ph: 613-632-5200

Fax: 613-632-1185

Ph: 613-632-5200

Fax: 613-632-1185

Terms		Ship Via	
Quantity		Description	
1	Part: ASST	Rev:	
lot			
	20 PCS 646.3313 (13.10) 11 PCS 646.3810 (6.55) 10 PCS 646.3812 (6.10) 16 PCS 646.3813 (6.10) 12 PCS 646.9811 (32.60) 10 PCS 646.9812 (18.15) <i>4 + 2 + 4</i> 4 PCS 647.9410 (10.70) 8 PCS 647.9411 (24.50) HARD ANODIZE BLACK MIL-A-8625 TYPE III CLASS 2 PRIME MIL-P-23377J TYPE I CLASS N 3 PCS D2224 (2.00) RED ANODIZE MIL-A-8625 TYPE II CLASS 2 PRICE IS PER PIECE Job: 20140236 PO: 23813 Line:		
Certificate of Conformance A.T.G. Industries certifies that all items in this shipment are in conformance with all requirements, specifications and drawings referenced in the purchase order. ISO 9001 : 2008 REGISTERED ATG SALES-2010 TERMS APPLY DATE: <i>24/4/14</i> CERTIFIED SIGNATURE: <i>[Signature]</i> RECEIVER SIGNATURE: _____			